

Claims

1. An airbag fabric comprising intersecting warp and weft threads made of at least one of synthetic fibers and filaments and woven at such a density that openings remaining between their intersections yield an at least microporous structure in said fabric, wherein at least one of crystalline and amorphous particles are incorporated in at least some of said openings.
2. The airbag fabric of claim 1, wherein said crystalline and amorphous particles consist of incombustible, inorganic material.
3. The airbag fabric of claim 1, wherein said crystalline and amorphous particles consist of cation-active silica.
4. The airbag fabric of claim 1, wherein said particles are particles of colloidal silicic acid (colloidal silica).
5. The airbag fabric of claim 1, wherein at least one of said warp and weft threads are made of polyamide.
6. The airbag fabric of claim 1, wherein at least one of said warp and weft threads are made of polyester.
7. The airbag fabric of claim 1, wherein at least one of said warp and weft threads are made of textured yarn.
8. The airbag fabric of claim 1, wherein said fabric, prior to said incorporation of at least one of crystalline and amorphous particles, is an uncoated flat fabric.
9. The airbag fabric of claim 1, wherein said fabric is a two-layered double fabric that is partially sewn or woven together.
10. The airbag fabric of claim 1, wherein said fabric has a coating or finish of polymeric material that has been applied after said incorporation of at least one of crystalline and amorphous particles.

11. The airbag fabric of claim 10, wherein said coating or finish consists of or comprises a silicone.

12. The airbag fabric of claim 1, wherein a static friction at the intersections between the warp and weft threads is present that is at least 5% greater than that of an untreated fabric having the same construction.

13. A method for the manufacture of an airbag fabric comprising intersecting warp and weft threads made of at least one of synthetic fibers and filaments and woven at such a density that openings remaining between their intersections yield an at least microporous structure in said fabric, wherein a synthetic raw fabric formed of said at least microporous structure is finished wet-chemically on a padding machine (Foulard) by passing a strip of the raw fabric through an aqueous dispersion of colloidal silicid acid, followed by a drying step, to form an airbag fabric having at least one of crystalline and amorphous silica particles incorporated in at least some of the openings between the intersections of warp and weft.

14. The method of claim 13, wherein said aqueous dispersion has a concentration of 0.5% to 35% by weight of silicid acid.

15. The method of claim 13, wherein said aqueous dispersion has a pH of less than 7.

16. The method of claim 13, wherein said aqueous dispersion is compatible with at least one of cationic and non-ionic finishing agents.

17. The method of claim 13, wherein said fabric, after said drying step, is coated with a polymer by impregnation or lamination or a combination thereof.

18. The method of claim 17, wherein said polymer is a silicone.

19. The airbag fabric of claim 1, wherein said airbag fabric forms part of a vehicle occupant restraint system.

10054827.012300

20. The airbag fabric of claim 1, wherein said airbag fabric forms part of a side-impact airbag.

10054827.012302